



Impact Beyond Numbers

When you receive this issue of *IEEE Signal Processing Magazine* (*SPM*), the International Conference on Acoustics, Speech, and Signal Processing (ICASSP) will be taking place in beautiful Brisbane, Australia. *SPM*'s Editorial Board will meet in person during ICASSP. This is a valuable opportunity for the Editorial Board to reflect on the progress made so far, the plans being carried out, and to brainstorm ideas to bring the magazine to the next level.

Ten new Editorial Board members started their term this year: Sven Lončarić (University of Zagreb, Croatia), Brian Lovell (University of Queensland, Australia), Yi Ma (ShanghaiTech University, China), Henrique (Rico) Malvar (Microsoft Research), Athina Petropulu (Rutgers University), Peter Ramadge (Princeton University), Shigeki Sagayama (Meiji University and emeritus University of Tokyo, Japan), Shihab Shamma (University of Maryland), Gregory Wornell (Massachusetts Institute of Technology), and Dapeng Wu (University of Florida). Together with the continuing Editorial Board members, these colleagues have brought to our magazine a tremendous amount of collective knowledge and experiences. Knowing the many commitments that they already have, I greatly appreciate their willingness to serve on *SPM*'s Editorial Board.

I would also like to welcome Dr. Andres Kwasinski, who was a devoted area editor for columns and forum for the past three years, as our area editor for social media and outreach. This newly created area editor position will help explore new types of

content and provide effective outreach to members and readers.

The magazine has been a premier platform for researchers to contribute tutorial surveys and overviews on the latest advances in signal processing. This issue of *SPM* includes three clusters of feature articles centered on learning and classification, new advances in signal processing theories and methods, and interesting new signal processing applications. It is due to the tireless efforts of Prof. Marc Moonen, past area editor for feature articles, and Prof. Abdelhak Zoubir, *SPM*'s past editor-in-chief, that we are able to bring this diverse set of articles to you in one issue. Prof. Shuguang (Robert) Cui, *SPM*'s new area editor for feature articles, also contributed to assembling this issue. My sincere thanks to all of their efforts!

It is common today to characterize the impact of articles using citation statistics. Here, beyond numbers, I would like to share a personal experience of publishing with *SPM* that may shine some light toward the impact on authors and readers. My first article with *SPM* was in response to the call for papers to the special issue on digital rights management (DRM) more than ten years ago. I was working with several colleagues on tracing the leak of multimedia documents by embedding specially designed signals in image and video so that each copy is uniquely labeled. The guest editors reminded us of *SPM*'s tutorial article style, which was in place to ensure that articles were to be understood by a broad audience.

One of the guidelines that I still remember today is the number of equations—no more than three—which sounded impossible at first: after all, we were planning to synthesize the work from a series of research papers by several representative groups, and the number of equations

in each of these papers was in the double digits! This seemingly stringent constraint pushed us to think hard on how to present the ideas in accessible terms, with the minimum number of equations. For example, to explain the essential idea of a complex code construction from a seminal theoretical work, we developed a toy example and created step-by-step illustrations. This process of publishing a tutorial article with *SPM* helped me develop a deeper understanding toward the research problems and obtain valuable insights that inspired later research.

The article was published in the March 2004 issue of *SPM* as part of a timely and balanced article collection on DRM with beautiful artistic designs. The IEEE *Xplore* online library was in its infancy then. So I mailed hard copies of the issue to several researchers overseas, including one to Prof. Yanda Li, who led the signal and information processing program at my college alma mater, Tsinghua University, in China. Later that year, I received a phone call from a college friend with whom I hadn't been in contact for many years. As it turned out, this friend faced an antipiracy challenge when developing digital technologies for China's broadcasting industry, but few researchers in China at the time had worked on this problem. When he came to consult Prof. Li, my article in that special issue provided a starting point for discussion. The world is so small! Indeed, beyond citation numbers, *SPM* has served as a vehicle to connect researchers across mountains and oceans, and bring together signal processing professionals in academia and industry.